

Work Order ID 62194

September 21, 2010 3:18:51 PM



Page 1

Item ID: D212-664-101TRN

Accept



Setup Start



Revision ID:

Stop



Item Name: Crosstube Turning Detail

Start Date: 9/21/10 Start Qty: 1.00



Cust Item ID:

Required Date: 10/04/10 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID Tool # Plan Accept Reject Reject Insp.
Code Qty Qty Number Stamp

Draw Nbr

Revision Nbr

D212-664-141

Rev D

100

0.00



Mori Seiki

MORI SEIKI CNC LATHE LARGE

Memo

0.00

Mori Seiki CNC Lathe Large

1-Fill tube with sand & install plugs DT8534 on both ends as per Folio FA113
2-Turn first side as per Folio FA113
3-File down transition lines smooth.

A.m 10-09-22 ①

110

0.00



QC

QC1- Inspect dimensions to dimension sheet

Memo

0.00

Quality Control

A.m 10-09-22 ①

120

0.00



Mori Seiki

MORI SEIKI CNC LATHE LARGE

Memo

0.00

Mori Seiki CNC Lathe Large

1-Turn second side as per Folio FA113
2-File down transition lines smooth.
3-Remove sand and plugs

A.m 10-09-22 ①

Dart Aerospace Ltd

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: D212-664-101 TRN PAR #: _____ Fault Category: x-tubes NCR: (Yes) No DQA: / Date: 10/10/01
 Resolution: Accepted Disposition: USE AS IS QA: N/C Closed: W Date: 10/10/01

| NCR: <u>62194</u> | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|-------------------|------|--|----------------------------------|---|-----------------------|---------------------------|----------------------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
| 10.09.28 | 100 | Tube (d) is over by 0.010 - 0.020 in taper See NCR 10-351 R.C. LOA | <u>CP</u> 10.09.28 QSI 042 | Acceptable. REF attached explanation on effect on stiffness | <u>CP</u> 10.09.28 | <u>S</u> 10/09/29 | <u>CP</u> 10.09.28 QSI 042 | <u>S</u> 10/09/29 |
| | | | | | | | | |
| | | | | | | | | |

NOTE: Date & initial all entries

Work Order ID 62194

September 21, 2010 3:18:52 PM

Page 2

Item ID: D212-664-101TRN

Accept

Revision ID:

Item Name: Crosstube Turning Detail

Start Date: 9/21/10 Start Qty: 1.00

Required Date: 10/04/10 Req'd Qty: 1.00

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run Start

QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID Tool # Plan Code Accept Qty Reject Qty Reject Number Insp. Stamp

130

QC1- Inspect dimensions to dimension sheet

0.00



QC

Memo

0.00

Quality Control

Q.m 10-09-22 ①

140

QC8- Inspect parts - second check

0.00



QC

Memo

0.00

Quality Control

Sidor/23 / 9/10.09.23

150

Crosstubes Chemical Conversion

0.00



HandFXtube

Memo

0.00

Hand Finishing Crosstubes

SAD
10-09-28

①

Work Order ID 62194

September 21, 2010 3:18:53 PM

Page 3

Item ID: D212-664-101TRN

Accept

Revision ID:

Item Name: Crosstube Turning Detail

Start Date: 9/21/10 Start Qty: 1.00

Required Date: 10/04/10 Req'd Qty: 1.00

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run Start

QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

160

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

Quality Control

DP

10-9-28

170

Packaging

0.00



Packaging

Memo

0.00

Packaging

Identify and Stock in kanban rack
Location: 46

DP

10-9-28

180

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

10/09/28
Pl 10-9-25
D

Dart Aerospace Ltd

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

NOTE: Date & initial all entries

| | |
|---|----------------------------------|
| DART AEROSPACE LTD | Work Order: 6244 |
| Description: Crosstube Assembly (205/212/412 High Fwd) | Part Number: D212-664-141 |
| Inspection Dwg: D212-664-141 Rev: D | Page 1 of 1 |

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

| Inspection Sheet Drawing Dimension | Tolerance | Actual Dimension | Accept | Reject | Method of Inspection | Comments |
|---------------------------------------|-----------|---------------------|---------|--------|-------------------------|-----------------|
| SIDE A | 0.200 | +/-0.010 | 0.200 | / | Q.M.-04 | N/A 10.05.28 |
| | R0.063 | +/-0.010 | R0.063 | / | | |
| | 2.740 | +0.005/-0.000 | 2.743 | / | | |
| | 5.097 | +/-0.030 | 5.097 | / | | |
| | 2.304 | +0.005/-0.000 | 2.309 | / | | |
| | 2.340 | +0.005/-0.000 | 2.345 | / | | |
| | 2.398 | +0.005/-0.000 | 2.403 | / | | |
| | 2.448 | +0.005/-0.000 | 2.453 | / | | |
| | 2.498 | +0.005/-0.000 | 2.503 | / | | |
| | 2.549 | +0.005/-0.000 | 2.554 | / | | |
| | 2.599 | +0.005/-0.000 | 2.604 | / | | |
| | 2.671 | +0.005/-0.000 | 2.676 | / | | |
| | 2.701 | +0.005/-0.000 | 2.706 | / | | |
| | | | | | | |
| SIDE B | 0.200 | +/-0.010 | 0.200 | / | Q.M.-04 | |
| | R0.063 | +/-0.010 | R0.063 | / | | |
| | 2.740 | +0.005/-0.000 | 2.743 | / | | |
| | 5.097 | +/-0.030 | 5.097 | / | | |
| | 2.304 | +0.005/-0.000 | 2.309 | / | | |
| | 2.340 | +0.005/-0.000 | 2.345 | / | | |
| | 2.398 | +0.005/-0.000 | 2.403 | / | | |
| | 2.448 | +0.005/-0.000 | 2.453 | / | | |
| | 2.498 | +0.005/-0.000 | 2.503 | / | | |
| | 2.549 | +0.005/-0.000 | 2.554 | / | | |
| | 2.599 | +0.005/-0.000 | 2.604 | / | | |
| | 2.671 | +0.005/-0.000 | 2.676 | / | | |
| | 2.701 | +0.005/-0.000 | 2.706 | / | | |
| | 126.514 | +/-0.020 | 126.510 | / | | |

| | | | |
|--------------------------|--------------------|----------------------------|-----|
| Measured by: Q.M. | Audited by: | Prototype Approval: | N/A |
| Date: 10.09.22 | Date: | Date: | N/A |

| Rev | Date | Change | Revised by | Approved |
|-----|----------|--|------------|----------|
| A | 05.04.27 | New Issue (P/O D412-664-101) | KJ/JLM | |
| B | 06.03.15 | Tolerance revised for 5.097 per Dwg Rev update | KJ/JLM | |
| C | 07.05.28 | Dwg Rev updated | KJ/JLM | |
| D | 10.02.02 | Dimension 126.514 was 126.51 | KJ | |

| | | |
|---|--|----------------------------------|
| DART AEROSPACE LTD | | Work Order: 62184 |
| Description: Crosstube Assembly (205/212/412 High Fwd) | | Part Number: D212-664-141 |
| Inspection Dwg: D212-664-141 Rev: D | | Page 1 of 1 |

FIRST ARTICLE INSPECTION CHECKLIST

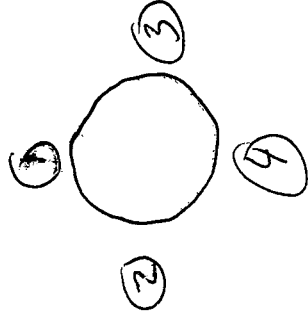
☒ First Article ☐ Prototype

| Inspection Sheet | Drawing Dimension | Tolerance | Actual Dimension | Accept | Reject | Method of Inspection | Comments |
|------------------|-------------------|---------------|------------------|--------|--------|----------------------|-------------|
| SIDE A | 0.200 | +/-0.010 | 2.00 | ✓ | | 12" calipers | ED-14 |
| | R0.063 | +/-0.010 | 0.063 | ✓ | | R-6 | |
| | 2.740 | +0.005/-0.000 | 2.743/2.743 | ✓ | ✗ | ED-14 | |
| | 5.097 | +/-0.030 | 5.089 | ✓ | | ✓ | OK |
| | 2.304 | +0.005/-0.000 | 2.315 | | ✓ | ✓ | |
| | 2.340 | +0.005/-0.000 | 2.350 | | ✓ | ✓ | CP 10.05.28 |
| | 2.398 | +0.005/-0.000 | 2.412 | | ✓ | ✓ | |
| | 2.448 | +0.005/-0.000 | 2.466 | | ✓ | ✓ | |
| | 2.498 | +0.005/-0.000 | 2.516 | | ✓ | ✓ | |
| | 2.549 | +0.005/-0.000 | 2.569 | | ✓ | ✓ | |
| | 2.599 | +0.005/-0.000 | 2.615 | | ✓ | ✓ | |
| | 2.671 | +0.005/-0.000 | 2.684 | | ✓ | ✓ | |
| | 2.701 | +0.005/-0.000 | 2.701 | ✓ | | ✓ | |
| | | | | | | | |
| SIDE B | 0.200 | +/-0.010 | 2.00 | ✓ | | 12" calipers | ED-14 |
| | R0.063 | +/-0.010 | 0.063 | ✓ | | R-6 | |
| | 2.740 | +0.005/-0.000 | 2.741/2.741 | ✓ | | ED-14 | |
| | 5.097 | +/-0.030 | 5.083 | ✓ | | ✓ | |
| | 2.304 | +0.005/-0.000 | 2.315 | | ✓ | ✓ | |
| | 2.340 | +0.005/-0.000 | 2.351 | | ✓ | ✓ | |
| | 2.398 | +0.005/-0.000 | 2.411 | | ✓ | ✓ | |
| | 2.448 | +0.005/-0.000 | 2.462 | | ✓ | ✓ | |
| | 2.498 | +0.005/-0.000 | 2.513 | | ✓ | ✓ | |
| | 2.549 | +0.005/-0.000 | 2.566 | | ✓ | ✓ | |
| | 2.599 | +0.005/-0.000 | 2.616 | | ✓ | ✓ | |
| | 2.671 | +0.005/-0.000 | 2.688 | | ✓ | ✓ | |
| | 2.701 | +0.005/-0.000 | 2.716 | | ✓ | ✓ | |
| | 126.514 | +/-0.020 | 126.500 | ✓ | | Tap measure | ED-14 |

| | | | |
|-----------------------|-----------------------|----------------------------|-----|
| Measured by: S | Audited by: P | Prototype Approval: | N/A |
| Date: 10/09/28 | Date: 10.05.23 | Date: | N/A |

| Rev | Date | Change | Revised by | Approved |
|-----|----------|--|------------|----------|
| A | 05.04.27 | New Issue (P/O D412-664-101) | KJ/JLM | |
| B | 06.03.15 | Tolerance revised for 5.097 per Dwg Rev update | KJ/JLM | |
| C | 07.05.28 | Dwg Rev updated | KJ/JLM | |
| D | 10.02.02 | Dimension 126.514 was 126.51 | KJ | |

| | Q2 Norm | W022 | | | |
|--------|------------|------------------|------------------|------------------|------------------|
| SIDE A | 2.304 | 0.158 | 0.153 | 0.165 | 0.160 |
| | 2.340 | 0.177 | 0.171 | 0.184 | 0.179 |
| | 2.448 | 0.289 | 0.266 | 0.243 | 0.246 |
| | | 0.292 | 0.295 | 0.290 | 0.266 |
| | 2.498 | 0.299 | 0.286 | 0.263 | 0.269 |
| SIDE B | 2.304 | 0.162 | 0.166 | 0.149 | 0.159 |
| | 2.340 | 0.172 | 0.186 | 0.168 | 0.178 |
| | 2.448 | 0.253 | 0.266 | 0.247 | 0.260 |
| | 2.498 | 0.274 | 0.285 | 0.276 | 0.287 |



DART

Inertia of x tube above cuff, $I_{xx} = 0.598 \text{ in}^4$

@ 0.070" above nom. = 0.647 in⁴

Slope of Dart cross tube deflection from

TP-1212-664-2, $M = 780$

$$\text{Adjusted for 0.020 larger OD, } M = \frac{647}{598} \times 780 = \underline{\underline{844}}$$

Slope of OEM cross tube deflection = $M = 864$

∴ Dart tube still more flexible.

16.08.28



| Item | Qty -141 | Qty -141B | Part Number | Description |
|------|-------------|--------------|----------------|---|
| 1 | X | | D212-664-141 | CROSSTUBE ASSEMBLY (205/212/412 HIGH FWD) |
| 2 | | X | D212-664-141B | CROSSTUBE ASSEMBLY (214 HIGH FWD) |
| 3 | 1 | 1 | D6005-128 | CROSSTUBE |
| 4 | 2 | 2 | D2893-1 | SUPPORT |
| 5 | 4 | 4 | D3595-063-450 | RUBBER CUSHION |
| 6 | 4 | 4 | MS21920-25 | CLAMP (OR MS21920-26) |
| 7 | A/R | A/R | MAGNOBOND 6398 | ROCKWELL SPECIFICATION RBO-120-023 ADHESIVE (TEXTRON/BELL SPEC. 299-947-100, TYPE II, CLASS 2 ADHESIVE) |

GENERAL NOTES:

- 1) MATERIAL: MANUFACTURED FROM D6005-128
FINISHED LENGTH = 126.514±0.020
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2
PAINT OUTSIDE PER DART QSI 005 4.2
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED.
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX.
- 6) IDENTIFICATION: SCRIBE DART PART NUMBER "D212-664-XXX" AND BATCH NUMBER ON INSIDE OF CUFF
USING VIBRATING STYLUS
- 7) WEIGHT: D212-664-141 = 33.6 lbs (PER IIN-D212-664)
D212-664-141B = 33.6 lbs (PER IIN-D212-664)
- 8) PART IS SYMMETRIC ABOUT CENTERLINE.
- 9) RUN CUTTER OFF PART. BLEND OUT EDGE LONGITUDINALLY, TRANSITION SHOULD BE SMOOTH.
- 10) BEND PROGRESSIVELY WITH A MINIMUM OF 3 PASSES. MAXIMUM TUBE FLATTENING DUE TO BENDING IS 6% BASED ON O.D.
- 11) LIQUID PENETRANT INSPECT OUTSIDE SURFACE OF CROSSTUBE PER QSI 038.
- 12) INSTALL D2893-1 SUPPORT USING 0.03" TO 0.06" THICK LAYER OF MAGNOBOND 6398 TO THE SURFACE OF D2893-1 THAT WILL BE IN CONTACT WITH THE CROSSTUBE PER QSI 015. LET CURE FOR 12 HOURS AFTER INSTALLATION AND PRIOR TO PACKAGING.
- 13) INSTALL MS21920-25 CLAMPS (OR -26) WITH D3595-063-450 RUBBER CUSHIONS TO SECURE THE D2893-1 SUPPORT ON TOP SIDE OF THE CROSSTUBE. ENSURE CLAMPS ARE OPPOSITE OF CROSSTUBE SUPPORT.
- 14) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 15) TORQUE CLAMPS 80 TO 100 IN-LB. ENSURE AT LEAST 1.5 THREADS SHOWING IN SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING.

W/O 62194

RELEASED
2009-10-29
M

| | | | |
|------------|--|--|--------------|
| D | REFORMAT/REVISE GENERAL NOTES/PART LIST; REORGANIZED VIEWS AND REFORMATTED DRAWING TO CURRENT STANDARDS; ADD -141B (ZN B4-2, D4-2); REMOVED REF & ADD TOLERANCES (ZN B4-3, C6-3, C8-3 & B6-3); RELOCATED FLAG #6 PER PAR 08-046 (ZN A5-3); MOVED TURNING DETAIL & UPDATED TOLERANCE TO SHEET 4 | RF | 09.09.30 |
| C | REMOVE -851 ABRASION STRIP; ADD MAGNOBOND 6398, CUSHION, REVERSE CLAMPS | PH | 07.03.08 |
| B | ADD HOLES FOR COMPATABILITY WITH BHT/AA SKIDTUBES | PH | 05.02.04 |
| A | NEW ISSUE | PH | 00.12.12 |
| REV. | DESCRIPTION | BY | DATE |
| DESIGN | PH | DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA | |
| DRAWN | RF | | |
| CHECKED | PH | DRAWING NO. | REV. D |
| MFG. APPR. | PH | D212-664-141 | SHEET 1 OF 4 |
| APPROVED | PH | TITLE | SCALE |
| DE APPR. | PH | XTUBE ASS'Y (205/212/412 HI FWD) | NTS |
| DATE | 09.09.30 | COPYRIGHT © 2000 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL. IT IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD. | |

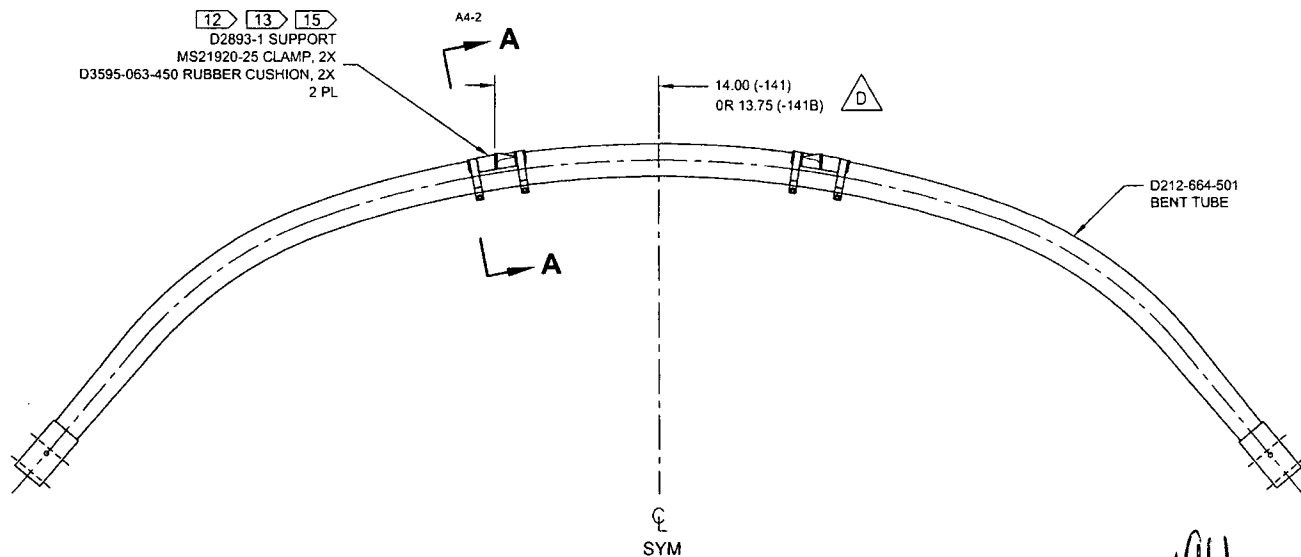
| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

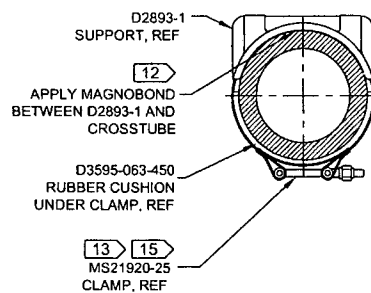
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

NOTE: Date & initial all entries



D212-664-141/-141B
ASSEMBLY DETAIL



SECTION A-A
SCALE 4X

RELEASED
2009-10-29

| | | | |
|------------|----------|--|--------------|
| DESIGN | PH | DART AEROSPACE LTD | |
| DRAWN | RF | HAWKESBURY, ONTARIO, CANADA | |
| CHECKED | Q | DRAWING NO. | REV. D |
| MFG. APPR. | S | D212-664-141 | SHEET 2 OF 4 |
| APPROVED | 14 | TITLE | SCALE |
| DE APPR. | H | XTUBE ASS'Y (205/212/412 HI FWD) | NTS |
| DATE | 09.09.30 | <small>COPYRIGHT © 2000 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small> | |

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

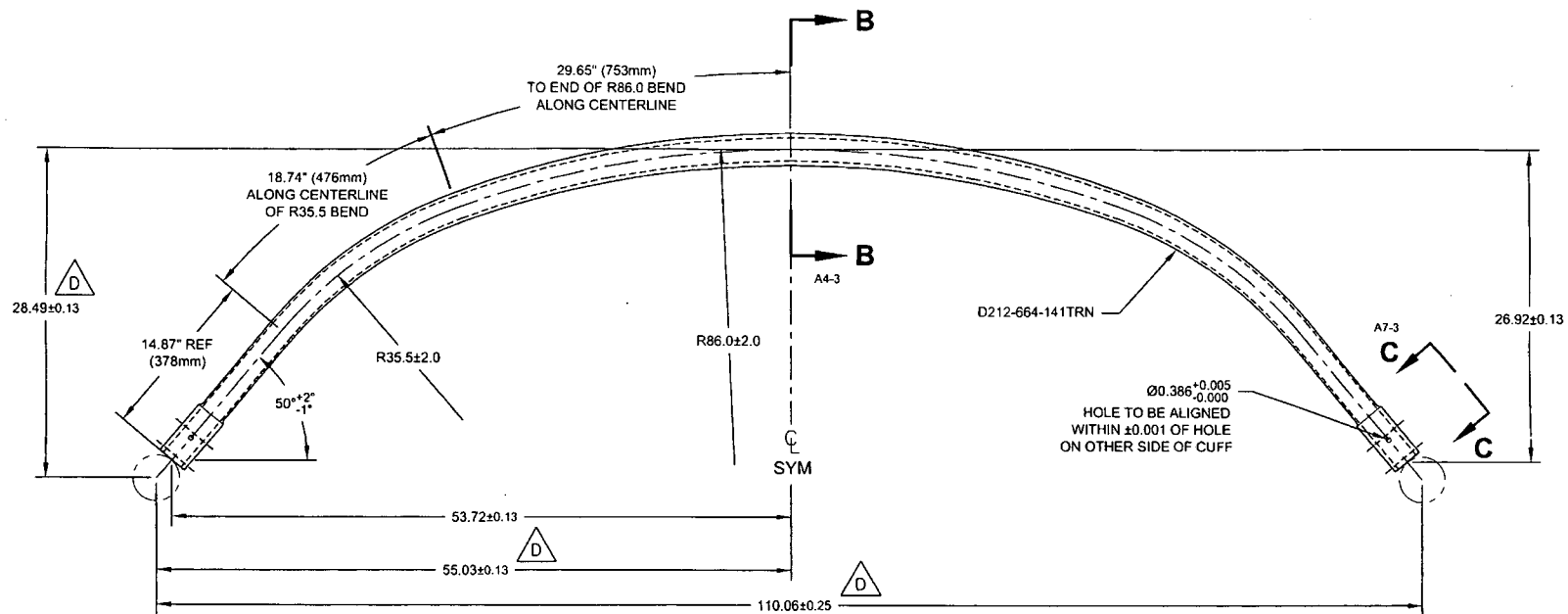
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

NOTE: Date & initial all entries

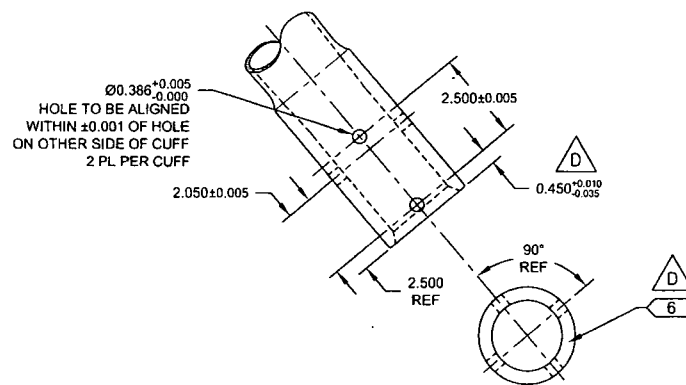
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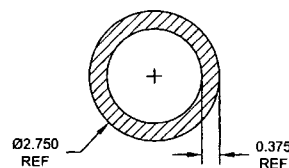
D212-664-501
BENDING AND DRILLING DETAIL 10 D

6264

RELEASED
2009-10-29



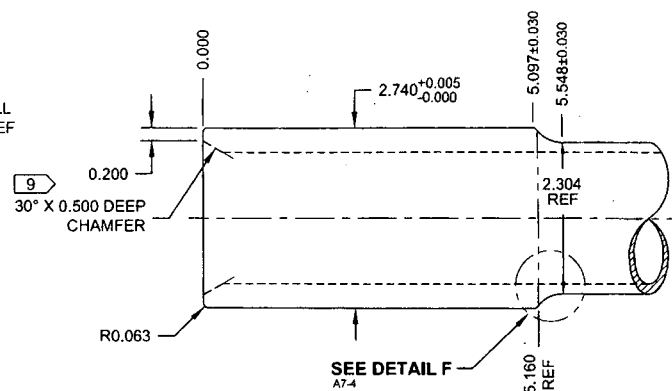
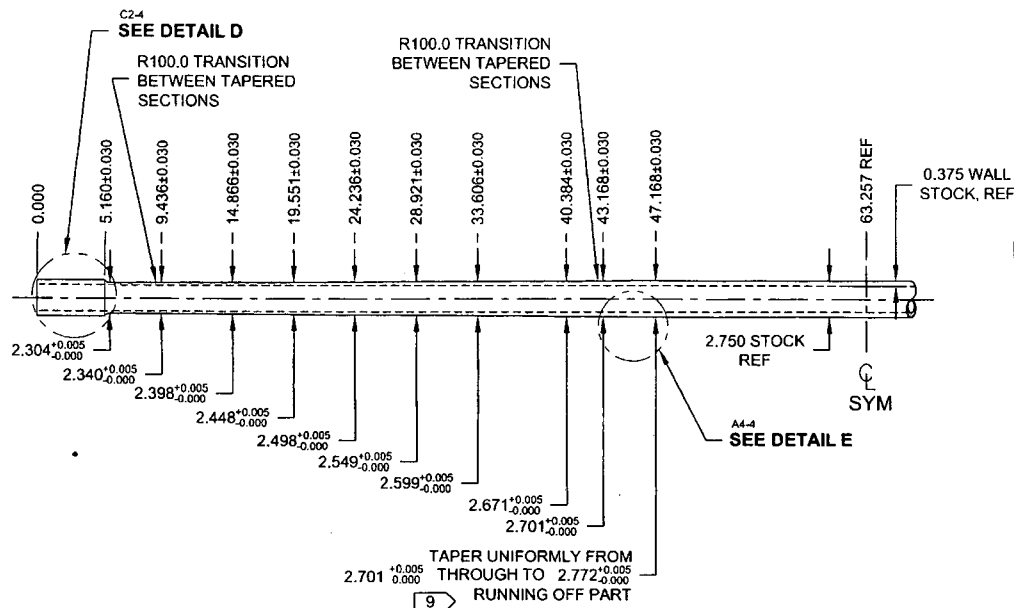
VIEW C-C: CUFF DETAIL C2-3
SCALE 3X



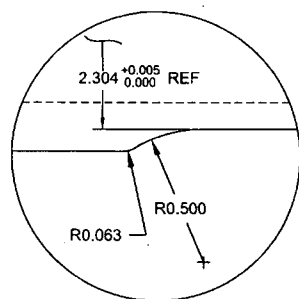
SECTION B-B C4-3
SCALE 4X

| | | | |
|--|----------|--|--------------|
| DESIGN | PH | DART AEROSPACE LTD | |
| DRAWN | RF | HAWKESBURY, ONTARIO, CANADA | |
| CHECKED | Q | DRAWING NO. | REV. D |
| MFG. APPR. | AS | D212-664-141 | SHEET 3 OF 4 |
| APPROVED | AS | TITLE | SCALE |
| DE APPR. | AS | XTUBE ASS'Y (205/212/412 HI FWD) | NTS |
| DATE | 09.09.30 | COPYRIGHT © 2005 BY DART AEROSPACE LTD | |
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8 7 6 5 4 3 2 1

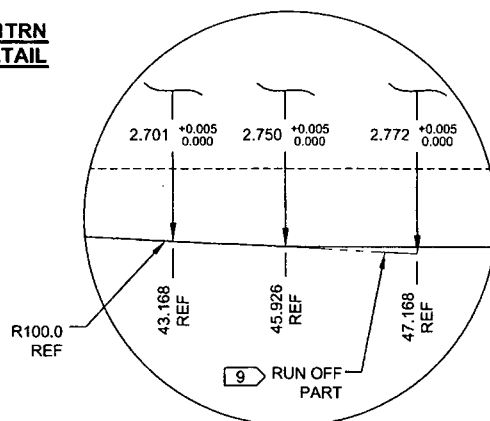


DETAIL D:
CROSSTUBE CUFF D8-4
SCALE 5X



DETAIL F:
CUFF TRANSITION C2-4
SCALE 10X

D212-664-141TRN
TURNING DETAIL



DETAIL E:
TAPER RUN-OFF C5-4
NOT TO SCALE

| | | | |
|------------|----------|---|--------------|
| DESIGN | PH | DART AEROSPACE LTD | |
| DRAWN | RF | HAWKESBURY, ONTARIO, CANADA | |
| CHECKED | Q | DRAWING NO. | REV. D |
| MFG. APPR. | DS | D212-664-141 | SHEET 4 OF 4 |
| APPROVED | AP | TITLE | SCALE |
| DE APPR. | TH | XTUBE ASS'Y (205/212/412 HI FWD) | NTS |
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2009-10-29
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